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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,304

04/19/2006

Junji Sato

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01/22/2009

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EXAMINER

MALEK, LEILA

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,304	<b>Applicant(s)</b> SATO ET AL.	
	<b>Examiner</b> LEILA MALEK	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/19/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Applicant's claim for the benefit of a prior-filed PCT application is acknowledged.
2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/576,304, filed on 04/19/2006.

### ***Information Disclosure Statement***

3. The information disclosure statement submitted on 04/19/2006 has been considered and made of record by the Examiner.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As claim 16, Applicant fails to disclose how the compensator obtains the constant by dividing the phase distortion by the magnitude of the phase change and compensated the phase distortion obtained by multiplying the obtained constant by the magnitude of the frequency change in a way to enable one skilled on the art to use the same method.

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This equation does not match with any of the equations cited by the Applicant in invention's disclosure.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 12 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Posti (US 2002/0021764).

As to claims 12, 19, and 20, Posti discloses an apparatus comprising: a modulator (see Fig. 4, modulators 106) that modulates a first baseband (see paragraph 0040) signal and generates a modulated signal; and a compensator 108 that compensates a phase distortion between the first baseband signal and a second baseband signal (see the output of channeliser 140) that is generated by demodulating the modulated signal (see paragraph 0066) with respect to the first baseband signal. At this point, Examiner would like to call the attention of the Applicant to the description of limitation: compensating a phase distortion between the first baseband signal and a second baseband signal "based on a magnitude of a phase change between adjacent data of the first baseband signal and a predetermined constant", in the specification paragraphs 0038, 0043, and in claim 14. It appears that for finding phase distortion between two signals, Applicant calculates the phase distortion value by subtracting the signals, and then dividing the obtained phase distortion value from subtraction, by the

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magnitude of the frequency change, and multiplying the result by the magnitude of the frequency change. A closer examination of this formula reveals that the phase distortion value is first divided by a number (i.e. the magnitude of frequency change) and then multiplied by the same number. Since these numbers actually cancel each other out, they do not have any effects on the final result of the phase distortion. Posti discloses that the phase distortion value can be calculated by subtraction of the first signal (i.e. the output of the channel encoders 104) and the second signal (i.e. the output of the channeliser/demodulator) (see Fig. 7 and paragraph 0066). Therefore, the apparatus disclosed by Posti has the same functionality of the apparatus cited by the Applicant in claims 12, 19, and 20.

As to claim 17, Posti discloses that the demodulator (see Fig. 4, block 140 and paragraph 0066) generates the second baseband signal and demodulates a received signal.

As to claim 18, Posti discloses that the modulator modulates a carrier signal using a first baseband signal (see paragraph 0040) compensated by the compensator 108 and generates the modulated signal.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Posti.

As to claim 13, Posti discloses all the subject matters claimed in claim 12, except that the compensator transforms the magnitude of the phase change into a magnitude of a frequency change. However, since phase and frequency are related to each other, it would have been obvious to one of ordinary skill in the art at the time of invention to use the magnitude of the frequency change instead of the magnitude of the phase change in phase distortion calculations, to meet the requirements of the system.

As to claim 14, Posti does not disclose a storage that stores the constant obtained by dividing the phase distortion by the magnitude of the frequency change, however, it would have been clearly recognizable to one of ordinary skill in the art at the time of invention to use a storage to save any calculated value in the system for further processing that value. The limitations regarding obtaining the phase distortion by multiplying the magnitude of the frequency change by the constant has already been addressed by the Examiner in rejection of claim 12.

As to claim 15, Posti discloses a storage that has a table storing phase distortion selection information (see Fig. 7, block 200). The rest of the limitations cited in claim 15, have already been addressed by the Examiner in rejection of claim 12.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEILA MALEK whose telephone number is (571)272-8731. The examiner can normally be reached on 9AM-5:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leila Malek  
Examiner  
Art Unit 2611

/L. M./  
/Leila Malek/  
Examiner, Art Unit 2611

/Mohammad H Ghayour/  
Supervisory Patent Examiner, Art Unit 2611